



Deployment Issues

February 5, 2002

CEC Workshop Distributed Generation Workshop Plan



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Strategic Plan Goal

Objective: Provide a clean, sustainable, highly efficient and reliable energy future.

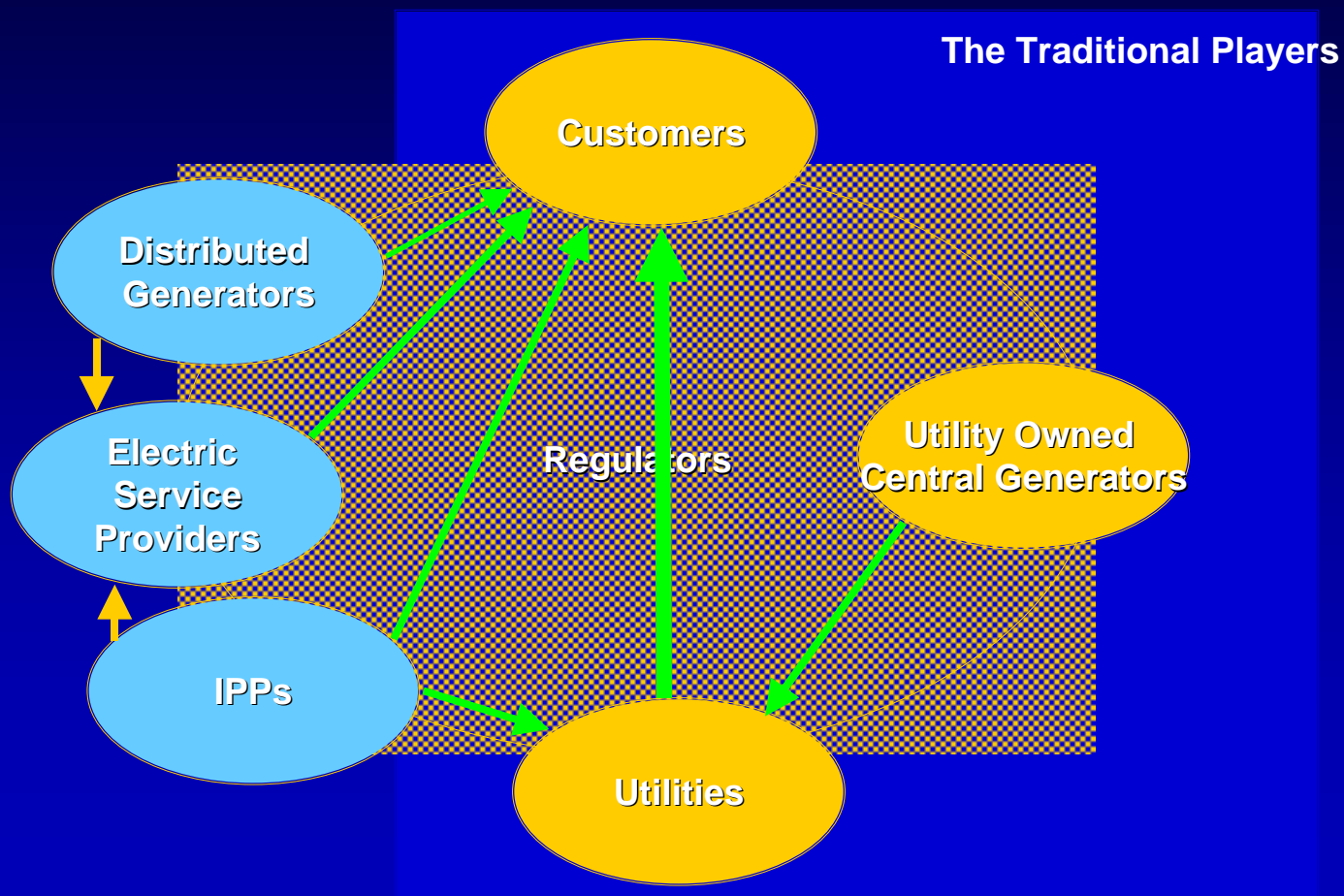
Challenge : How to achieve this objective.

Belief: Distributed Energy Resources have a major role to play in achieving this objective.

DER : The activity of generating energy (including electricity and heat) at or near the site of use.

Market Structure

Regulators dominate the market structure and define the market incentives



Regulatory Incentives and Business Models



The traditional regulatory scheme has incentivized utilities to provide some of the customers energy requirements

- **Electricity**
- **Reliability, safety**
- **Minimal financial exposure**

But some important customer requirements are not well addressed by the traditional model.

- **Heating, Cooling**
- **Sustainability, Renewable**
- **Low Cost, high efficiency**

Deployment Issues

- Utilities are the most successful Electric Service Providers and should be allowed to own DER for use in grid support and for meeting customers' energy needs
- Tariffs should be established to incentivize efficient fuel utilization through the deployment of Cooling, Heating and Power technologies to meet customer energy needs.
- Tariffs and other mechanisms should be used to encourage sustainable and renewable technologies.
- Markets for electricity produced from waste fuels needs to be re-established. Suspension of Direct Access has eliminated the ability to market electricity from waste.
- ESPs and utilities should be able to compete on their merits, not through regulatory advantage.

Deployment Issues

- The regulations/tariffs need to be stabilized.
- Proven demonstration sites in specific applications
- Interconnection
- Standby Rates and exit fees
- Distribution wheeling
- Technology neutrality
- Environmental Regulations

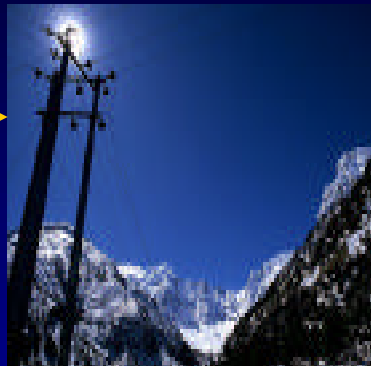
Backup generation is part of the grid system; not DER



Transmission



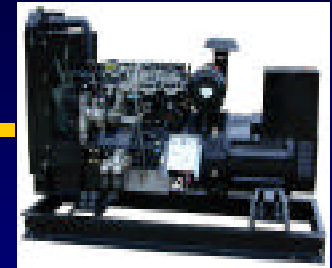
Distribution



Load

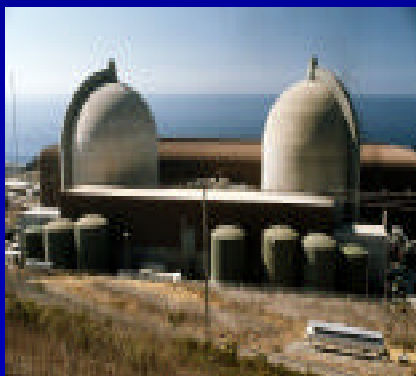


Back-up



- 100,000 \$/mile
- 6-7% electric losses
- Difficult to obtain right-of-ways

- 200 hours per year limit
- Exempt from emissions regulations
- Not interconnected
- Does not support the grid but operates after the grid has failed



- \$400-500/KW
- Difficult to permit

Generation



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